

In the Claims:

Please cancel claims 9-11, amend claims 1, 5, 8, 12 and 20, and add claims 23-29, without prejudice.

1. (Currently amended) A magnetic recording medium comprising a nonmagnetic substrate having applied thereon a magnetic recording layer, in which said substrate has, on an upper surface thereof, in sequence, a crystal orientation-improving layer and a seed layer consisting of a material having a higher surface energy than that of the crystal orientation-improving layer, and said seed layer has a thickness of not more than 2nm, when the thickness is determined assuming that the seed layer has a continuous thickness;

wherein said magnetic recording layer is constituted from a four-component metal alloy of cobalt, chromium, platinum and tantalum which is represented by the following formula:



in which

bal. means a balance amount, and

x is in the range of 1 to 5 at%.

2. (Original) A magnetic recording medium according to claim 1, in which said nonmagnetic substrate is a substrate of an aluminum-based alloy or a glass substrate.

3. (Canceled)

4. (Original) A magnetic recording medium according to claim 1 or 2, in which said seed layer is an island-like film consisting of an islandwise distributed and deposited material having a higher surface energy than that of the crystal orientation-improving layer.

5. (Currently Amended) ~~A magnetic recording medium according to claim 1 or 2,~~

A magnetic recording medium comprising a nonmagnetic substrate having applied thereon a magnetic recording layer, in which said substrate has, on an upper surface thereof, in sequence, a crystal orientation-improving layer and a seed layer consisting of a material having a higher surface energy than that of the crystal orientation-improving layer, and said seed layer has a thickness of not more than 2nm, when the thickness is determined assuming that the seed layer has a continuous thickness;

wherein ~~in which~~ said seed layer comprises rhenium.

6. (Original) A magnetic recording medium according to claim 1 or 2, in which said crystal orientation-improving layer comprises NiP or CrP.

7. (Original) A magnetic recording medium according to claim 1 or 2,

which further comprises an underlayer consisting of a chromium-based alloy between the seed layer and the magnetic recording layer.

8. (Currently Amended) ~~A magnetic recording medium according to claim 1 or 2,~~

A magnetic recording medium comprising a nonmagnetic substrate having applied thereon a magnetic recording layer, in which said substrate has, on an upper surface thereof, in sequence, a crystal orientation-improving layer and a seed layer consisting of a material having a higher surface energy than that of the crystal orientation-improving layer, and said seed layer has a thickness of not more than 2nm, when the thickness is determined assuming that the seed layer has a continuous thickness; and

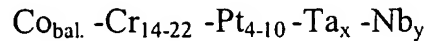
~~which further comprises an~~ adhesion-improving underlayer between the substrate and the crystal orientation-improving layer.

9-11. (Cancelled)

12. (Currently Amended) A magnetic recording medium comprising a nonmagnetic substrate having applied thereon a magnetic recording layer, in which said substrate has, on an upper surface thereof, in sequence, a crystal orientation-improving layer and a seed layer consisting of a material having a higher surface energy than that of the crystal orientation-improving layer, and said seed layer has a thickness of not more than 2nm,

when the thickness is determined assuming that the seed layer has a continuous thickness;

~~The magnetic recording medium according to claim 10, in which~~ wherein said magnetic recording layer is constituted from a five-component metal alloy of cobalt, chromium, platinum, tantalum and niobium which is represented by the following formula:



in which

bal. means a balance amount, and

a sum of x and y (x + y) is in the range of 1 to 5 at%.

13. (Original) The magnetic recording medium according to claim 1 or 2, which further comprises, applied over said magnetic recording layer, a protective layer consisting of carbon or diamondlike carbon.

14. (Original) A magnetic recording medium according to claim 1 or 2, which is in the form of a disk.

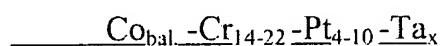
15-19. (Canceled)

20. (Currently amended) A magnetic recording device comprises a recording head section for recording in a magnetic recording medium and a reproducing head section for reproducing information, in which the magnetic recording medium comprises a

nonmagnetic substrate having applied thereon a magnetic recording layer, in which said substrate has on a upper surface thereof, in sequence, a crystal orientation-improving layer and a seed layer consisting of a material having a higher surface energy than that of the crystal orientation-improving layer, said seed layer having a thickness of not more than 2 nm, when the thickness is determined assuming that the seed layer has a continuous thickness; and

said recording head section is provided with a magnetoresistive head;

wherein said magnetic recording layer is constituted from a four-component metal alloy of cobalt, chromium, platinum and tantalum which is represented by the following formula:



in which

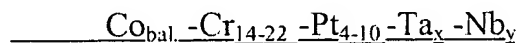
bal. means a balance amount, and

x is in the range of 1 to 5 at%.

21. (Original) A magnetic recording device according to claim 20, in which said nonmagnetic substrate is a substrate of an aluminum-based alloy or a glass substrate.

22. (Original) The magnetic recording device according to claim 20 or 21, in which said magnetoresistive head is a MR head, an AMR head or a GMR head.

23. (New) A magnetic recording device comprises a recording head section for recording in a magnetic recording medium and a reproducing head section for reproducing information, in which the magnetic recording medium comprises a nonmagnetic substrate having applied thereon a magnetic recording layer, in which said substrate has on a upper surface thereof, in sequence, a crystal orientation-improving layer and a seed layer consisting of a material having a higher surface energy than that of the crystal orientation-improving layer, said seed layer having a thickness of not more than 2 nm, when the thickness is determined assuming that the seed layer has a continuous thickness; and said recording head section is provided with a magnetoresistive head; wherein said magnetic recording layer is constituted from a five-component metal alloy of cobalt, chromium, platinum, tantalum and niobium which is represented by the following formula:



in which

bal. means a balance amount, and

a sum of x and y (x + y) is in the range of 1 to 5 at%.

24. (New) A magnetic recording medium according to claim 12, in which said nonmagnetic substrate is a substrate of an aluminum-based alloy or a glass substrate.

25. (New) A magnetic recording medium according to claim 12 or 24, in which said seed layer is an island-like film consisting of an islandwise distributed and deposited material having a higher surface energy than that of the crystal orientation-improving layer.

26. (New) A magnetic recording medium according to claim 12 or 24, in which said crystal orientation-improving layer comprises NiP or CrP.

27. (New) A magnetic recording medium according to claim 12 or 24, which further comprises an underlayer consisting of a chromium-based alloy between the seed layer and the magnetic recording layer.

28. (New) The magnetic recording medium according to claim 12 or 24, which further comprises, applied over said magnetic recording layer, a protective layer consisting of carbon or diamondlike carbon.

29. (New) A magnetic recording medium according to claim 12 or 24, which is in the form of a disk.